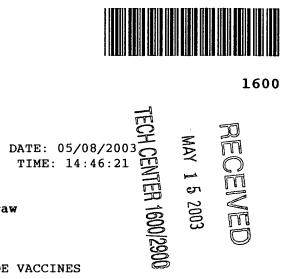
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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/242,202C

Input Set : A:\219482.sequence.txt Output Set: N:\CRF4\05082003\I242202C.raw

3 <110> APPLICANT: Nelson, Edward L. 4 Nelson, Peter J.

6 <120> TITLE OF INVENTION: A VECTOR FOR POLYNUCLEOTIDE VACCINES

8 <130> FILE REFERENCE: 219482

10 <140> CURRENT APPLICATION NUMBER: 09/242,202C

11 <141> CURRENT FILING DATE: 1999-11-01

13 <150> PRIOR APPLICATION NUMBER: PCT/US97/14306

14 <151> PRIOR FILING DATE: 1997-08-14

16 <150> PRIOR APPLICATION NUMBER: 60/023,931

17 <151> PRIOR FILING DATE: 1996-08-14

19 <160> NUMBER OF SEQ ID NOS: 31

21 <170> SOFTWARE: PatentIn version 3.1

23 <210> SEQ ID NO: 1 24 <211> LENGTH: 453

25 <212> TYPE: DNA

26 <213> ORGANISM: Artificial

28 <220> FEATURE:

29 <223> OTHER INFORMATION: Synthetic

31 <400> SEQUENCE: 1

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34	acgctcaagt	cagaggtggc	gaaacccgac	aggactataa	agataccagg	cgtttccccc	120
36	tggaagctcc	ctcgtgcgct	ctcctgttcc	gaccctgccg	cttaccggat	acctctccgc	180
38	ctttctccct	tcgggaagcg	tggcgctttc	tcaatgctca	cgctgtaggt	atctcagttc	240
40	ggtgtaggtc	gttcgctcca	agctgggctg	tgtgcacgaa	cccccgttc	agcccgaccg	300
42	ctgcgcctta	tccggtaact	atcgtcttga	gtccaacccg	gtaagacacg	acttatcgcc	360
44	actggcagca	gccactggta	acaggattag	cagagcgagg	tatgtaggcg	gtgctacaga	420
46	gttcttgaag	tggtggccta	actacggcta	cac			453

49 <210> SEQ ID NO: 2

50 <211> LENGTH: 453

51 <212> TYPE: DNA

52 <213> ORGANISM: Artificial

54 <220> FEATURE:

55 <223> OTHER INFORMATION: Synthetic

57 <400> SEQUENCE: 2 58 gtgtagccgt agttaggcca ccacttcaag aactctgtag caccgcctac atacctcgct 60 60 ctgctaatcc tgttaccagt ggctgctgcc agtggcgata agtcgtgtct taccgggttg 120 180 62 gactcaagac gatagttacc ggataaggeg cageggtegg getgaaeggg gggttegtge 64 acacaqeeea qettqqaqeq aacqaeetae aceqaaetqa gataeetaca eegtgaqeat 240 66 tgagaaagcg ccacgcttcc cgaagggaga aaggcggaca ggtatccggt aagcggcagg 300 68 gtcggaacag gagagcgcac gagggagctt ccagggggaa acgcctggta tctttatagt 360 70 cctgtcgggt ttcgccacct ctgacttgag cgtcgatttt tgtgatgctc gtcagggggg 420 72 cggagcctat ggaaaaacgc cagcaacgcg gcc 453

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RAW SEQUENCE LISTING DATE: 05/08/2003 PATENT APPLICATION: US/09/242,202C TIME: 14:46:21

Input Set : A:\219482.sequence.txt

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86 gatgacggca gatttagagt ctgctccctt tggccgctcg ggaaccccac cacgggtaat	120
88 gcttttactg gcctgctccc ttatcgggaa gcggggcgca tcatatcaaa tgacgcgccg	180
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95 <212> TYPE: DNA	
96 <213> ORGANISM: Artificial	
98 <220> FEATURE:	
99 <223> OTHER INFORMATION: Synthetic	
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106 agggagcaga ctctaaatct gccgtcatcg acttcgaagg ttcgaatcct tcccccacca	180
108 ccatcacttt caaaagtccg aaagaattc 111 <210> SEQ ID NO: 5	209
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116 <220> FEATURE:	
117 <223> OTHER INFORMATION: Synthetic	
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120 aataaa	6
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125 <212> TYPE: DNA	
126 <213> ORGANISM: Artificial	
128 <220> FEATURE:	
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135 <210> SEQ ID NO: 7	
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137 <212> TYPE: DNA	
138 <213> ORGANISM: Artificial	
140 <220> FEATURE:	
141 <223> OTHER INFORMATION: Synthetic	
143 <400> SEQUENCE: 7	
144 agtaaa	6
147 <210> SEQ ID NO: 8	
148 <211> LENGTH: 6	
149 <212> TYPE: DNA	
150 <213> ORGANISM: Artificial	

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/242,202C

DATE: 05/08/2003

TIME: 14:46:21

Input Set : A:\219482.sequence.txt

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156 aagaac	6
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161 <212> TYPE: DNA	
162 <213> ORGANISM: Artificial	
164 <220> FEATURE:	
165 <223> OTHER INFORMATION: Synthetic	
167 <400> SEQUENCE: 9	
168 aataca	6
171 <210> SEQ ID NO: 10	·
172 <211> LENGTH: 227	
173 <212> TYPE: DNA	
174 <213> ORGANISM: Artificial	
176 <220> FEATURE:	
177 <223> OTHER INFORMATION: Synthetic	
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182 agtcagagec ecegggeage acaggeeaat gecegteett ecectgeagg atgagtagtg	120
184 agtigeetete etggeeetgg aagtigeeae teeagtigeee accageetig teetaataaa	180
186 attaagttgc atcattttgt ctgactaggt gtcctctata atattat	227
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190 <211> LENGTH: 227	
191 <212> TYPE: DNA	
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200 ggctggtggg cactggagtg gcaactteca gggccaggag aggcacteac tactcatect	120
202 gcaggggaag gacgggcatt ggcctgtgct gcccggggggc tctgactaca ggtctcccc	180
204 atccccgcct ggggtcaagg catccactca ccatatggcc cttaagg	227
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218 ttatcagtga taaagtgtca agcatgacaa agttgcagcc gaatacagtg atccgtgccg	120
220 gccctggact gttgaacgag gtcggcgtag acggtctgac gacacgcaaa ctggcggaac	180
222 ggttgggggt gcagcageeg gegetttaet ggcaetteag gaacaagegg gegeettaag	240
224 ggccatatgc cg	252
227 <210> SEQ ID NO: 13	
228 <211> LENGTH: 35	
229 <212> TYPE: DNA	

RAW SEQUENCE LISTING DATE: 05/08/2003 PATENT APPLICATION: US/09/242,202C TIME: 14:46:21

Input Set : A:\219482.sequence.txt

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	<211> LENGTH: 38	
	<212> TYPE: DNA	
	<213> ORGANISM: Artificial	
	<220> FEATURE:	
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	<400> SEQUENCE: 14	
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	<211> LENGTH: 228	
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262	tagtcagage eccegggeag cacaggeeaa tgecegteet teceetgeag gatgagtagt	120
264	gagtgeetet eetggeeetg gaagttgeea etceagtgee caccageett gteetaataa	180
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	<210> SEQ ID NO: 16	
	<211> LENGTH: 1425	
	<212> TYPE: DNA	
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280	taaagtgtca agcatgacaa agttgcagcc gaatacagtg atccgtgccg gccctggact	120
282	gttgaacgag gtcggcgtag acggtctgac gacacgcaaa ctggcggaac ggttgggggt	180
284	gcagcagccg gcgctttact ggcacttcag gaacaagcgg gcgccttaag ggccatatgg	240
286	tgagtggatg cottgacccc aggcggggat gggggagacc tgtagtcaga gcccccgggc	300
288	agcacaggee aatgeeegte etteeeetge agtgagtagt gactgeeegg gtgggateee	360
290	tgtgacccct ccccagtgcc tctcctggcc ctggaagttg ccactccagt gcccaccagc	420
292	cttgtcctaa taaaattaag ttgcatcatt ttgtctgact aggtgtcctc tataatatta	480
294	taagettgat ategaattet tteteaaegt aacaetttae ageggegegt catttgatat	540
296	gatgegeeee getteeegat aagggageag geeagtaaaa geattaeeeg tggtggggtt	600
298	eccgagegge caaagggage agactetaaa tetqeegtea tegaettega aggttegaat	660
300	ectteecea ceaceateae ttteaaaagt eegaaagaat teetgeagee egtgtageeg	720
302	tagttaggee accaetteaa gaactetgta geacegeeta eatacetege tetgetaate	780
304	ctgttaccag tggctgctgc cagtggcgat aagtcgtgtc ttaccgggtt ggactcaaga	840
306	cgatagttac cggataaggc gcagcggtcg ggctgaacgg ggggttcgtg cacacagccc	900
308	agettggage gaacgaeeta caeegaaetg agataeetae agegtgagea ttgagaaage	960
310	gccacgcttc ccgaagggag aaaggcggac aggtatccgg taagcggcag ggtcggaaca	1020
117	Josephan John Holling and Joggong ggccggaaca	1020
312	ggagagegea egagggaget tecaggggga aacgeetggt atetttatag teetgteggg	1020

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/242,202C
DATE: 05/08/2003
TIME: 14:46:21

Input Set : A:\219482.sequence.txt

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316	tggaaaaacg ccag	gcaacgc	qqccqqqqqa	tccggagagc	tcactctaga	tgagagagca	1200
318	gtgagggaga gaca	agagact	cgaatttccg	gagctatttc	agttttcttt	tccgttttgt	1260
320	gcaatttcac ttat	tgatacc	ggccaatgct	tagttactat	tttqqaaact	ccccttaggg	1320
322	gatgccctc aact	taaccct	ataaagggcc	agcctgagct	gcagaggatt	cctgcagagg	1380
321	atcaagacag cac	ataaacc	togcacagee	teteccacag	gtacc	, , , , ,	1425
	<210> SEQ ID NO		cogododgoo		J		
	<211> LENGTH: 3						
	<211> LENGTH. (212) TYPE: DNA						
	<213> ORGANISM		aial		-		
		. ALCILI	CIGI				
	<220> FEATURE:	DODMA MTC	M. Crrnthot				
	<223> OTHER IN		on: Synthet	LC			
335	<400> SEQUENCE	: 1/		-tt	++ a+ aa+ aa	antagataga	60
	atgagcaagg gcg						120
338	gatgtgaatg ggc	acaaatt	ttctgtcagc	ggagagggtg	aaggigaige	cacatacyga	
340	aagctcaccc tgaa	aattcat	ctgcaccact	ggaaagctcc	ctgtgccatg	gecaacactg	180
342	gtcactacct tcac	cctatgg	cgtgcagtgc	ttttccagat	acccagacca	tatgaacgag	240
344	catgactttt tcaa	agagcgc	catgcccgag	ggctatgtgc	aggagagaac	catcttttc	300
346	aaagatgacg ggaa	actacaa	gacccgcgct	gaagtcaagt	tcgaaggtga	caccctggtg	360
348	aatagaatcg agt	tgaaggg	cattgacttt	aaggaagatg	gaaacattct	cggccacaag	420
350	ctggaataca acta	ataactc	ccacaatgtg	tacatcatgg	ccgacaagca	aaagaatggc	480
352	atcaaggtca act	tcaagat	cagacacaac	attgaggatg	gatccgtgca	gctggccgac	540
354	cattatcaac agaa	acactcc	aatcggcgac	cgccctgtgc	tcctcccaga	caacaattac	600
356	ctgtccaccc agte	ctgccct	gtctaaagat	cccaacgaaa	agagagacca	catggtcctg	660
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	<212> TYPE: DNA						
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	<223> OTHER IN	FORMATIO	N: Synthet	ic			
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371	aaagctcacc ctg	aaattca	tetacaccac	tggaaagctc	cctgtgccat	ggccaacact	180
376	ggtcactacc ttca	acctato	acatacaata	cttttccaga	tacccagacc	atatgaagca	240
270	gcatgacttt ttc	220200	costaccoa	agactatata	caggagagaa	ccatctttt	300
200	caaagatgac ggg	aagagcg	agagggggg	tgaagtcaag	ttcaaaaata	acaccctggt	360
380	gaatagaatc gag	ttanaaa	agaccccgcgc	taagccaag	ggaaagttg	toggccacaa	420
382	gaatagaate gag	tigaagg	geactgaett	ataggaagac	ggaaacaccc	aaaaaataa	480
384	gctggaatac aac	tataact	cccacaatgt	gracarcary	geegaeaage	addagaacyg	540
386	catcaaggtc aac	ttcaaga	tcagacacaa	callgaggal	ggateegtge	agetggeega	600
388	ccattatcaa caga	aacactc	caatcggcga	eggeeetgtg	electedeag	acaaccacca	660
390	cctgtccacc cag	tctgccc	gcctaaagat	cccaacgaaa	agagagacca	catygueeug	
392	ctggagtttg tgad	ccgctgc	tgggatcaca	catggcatgg	acgagetgta	caagigagee	720
394	atatggtgag tgg	atgcctt	gaccccaggc	ggggatgggg	gagacctgta	gtcagagccc	780
396	ccgggcagca cag	gccaatg	cccgtccttc	ccctgcagtg	agtagtgact	gcccgggtgg	840
398	gatccctgtg acco	cctcccc	agtgcctctc	ctggccctgg	aagttgccac	tccagtgccc	900
400	accageettg teet	taataaa	attaagttgc	atcattttgt	ctgactaggt	gtcctctata	960
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/08/2003 PATENT APPLICATION: US/09/242,202C TIME: 14:46:22

Input Set : A:\219482.sequence.txt

Output Set: N:\CRF4\05082003\I242202C.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 Seq#:28,29,30,31 VERIFICATION SUMMARY

DATE: 05/08/2003

PATENT APPLICATION: US/09/242,202C

TIME: 14:46:22

Input Set : A:\219482.sequence.txt